

EXHIBIT A

Curriculum Vitae

Name: Robert Michael Liskay, Ph.D.

Born: April 16, 1948

Education: B.S., Biological Sciences, University of California, Irvine, 1966-1970

Ph.D., Genetics, University of Washington, Seattle, 1970-1974

Advisor: Stanley M. Gartler

Career:

Postdoctoral Associate: Department of Molecular, Cellular, and Developmental Biology,
University of Colorado, Boulder, 1974-1978. Advisor: David M. Prescott

Research Associate: Research Associate, Department of Molecular, Cellular, and
Developmental Biology, University of Colorado, Boulder, 1978-1980

Faculty Positions: Assistant Professor (1980-1984), Therapeutic Radiology and Human
Genetics, Yale University School of Medicine

Associate Professor 1984-1987, Yale

Associate Professor, without term, (1987-1991), Yale

Professor, (1991-1993), Yale

Professor, (1993 - present) Molecular and Medical Genetics, Oregon Health
Sciences University, Portland, Oregon

Professional Honors: Damon Runyan-Walter Winchell Postdoctoral Fellowship
Recipient, 1975-1977, Swobedius Cancer Research Award, 1982-1983, Leukemia
Society of America Scholar Award, (July 1984 - June 1989)

Other Professional Activities:

Organizer of FASEB Summer Research Conference on
"Recombination and Genome Rearrangements", July, 1986.

NSF Eukaryotic Genetics Study Panel, 1986-1989, Ad Hoc on NIH Mammalian
Genetics Study Section, 1994

Teaching: Seminar Course for graduate students, Human Genetics, Yale 1983, 1985, 1987, 1990. Director of Graduate Studies, Human Genetics, Yale 1989-1990. Graduate student seminar, Yale 1991. Lecturer in Con562 Graduate Course, OHSU, 1994

Bibliography

Original Articles:

Godwin, A.R, Bollag, R.J. Christie, D.-M. and R. M. Liskay. Spontaneous and restriction enzyme-induced chromosomal recombination in mammalian cells, Proc. Natl. Acad. Sci., USA, 91:12551-12558 (1994).

Prolla, T.A., Pang, Q., Alani, E., Kolodner, R. D. and **R. M. Liskay**. MLH1, PMS1 and MSH2 interactions during the initiation of DNA mismatch repair in yeast. Science 265: 1091-1093 (1994).

Bronner C.B., Baker, S.M., Morrison, P.T. Paul T. Morrison, Gwynedd Warren, Leslie G. Smith Mary Kay Lescoe, Michael Kane, Christine Earabino, Rusty Lipford, Annika Lindblom, Pia Tannergard, Roni J. Bollag, Alan R. Godwin, David C. Ward, Magnus Nordenskjold, Richard Fishel, Richard Kolodner, and **R.M. Liskay**, Mutation in the DNA mismatch repair gene homologue hMLH1 is associated with hereditary non-polyposis colon cancer. Nature, 368:258-261 (1994)

Farber, R.A., Petes, T.D., Dominska, M., Hudgens, S.S. and **R.M. Liskay**. Instability of simple sequence repeats in a mammalian cell line. Human Molecular Genetics, 3:253-256 (1994).

Prolla, T.A., Christie, D.M. and **Liskay, R.M.** Dual requirement in the yeast *Saccharomyces cerevisiae* for two homologs of the bacterial DNA mismatch repair gene, *MutL*. Molecular and Cellular Biology, 14: 407-415 (1994).

Godwin, A.R. and **Liskay, R.M.** ; The Effects of Insertions on mammalian intrachromosomal recombination. Genetics, 136: 607-617 (1994).

Strand, M., Prolla, T.A., **Liskay, R.M.** and Petes, T.D. Destabilization of tracts of simple repetitive DNA by mutations affecting mismatch repair. Nature 365: 274-276 (1993).

Bollag, R.J., Elwood, D.R., Tobin, E.D., Godwin, A.R. and **Liskay, R.M.** Formation of Heteroduplex DNA during mammalian intrachromosomal gene conversion. Molecular and Cellular Biology, 12:1546-1552 (1992).

Hoekstra, M.F., **Liskay, R.M.**, Ou, A.C., DeMaggio, A.J., Burbee, D.G. and Heffron, F. HRR25, a putative protein kinase from budding yeast: association with repair of damaged DNA. *Science*, 253:1031-1034 (1991).

Bollag, R.J. and **Liskay, R.M.** Direct repeat analysis of chromatid interactions during intrachromosomal recombination in mouse cells. *Mol. Cell. Biol.*, 11:4839-4845 (1991).

Tsujimura, T., Maher, V.M., Godwin, A., **Liskay, R.M.** and McCormick, J.J. Frequency of intrachromosomal homologous recombination induced by UV radiation in normally-repairing and excision repair-deficient human cells. *Proc. Natl. Acad. Sci., U.S.A.*, 87:1566-1570 (1990).

Stachelek, J.L. and **Liskay, R.M.** Accuracy in intrachromosomal gene conversion in mouse cells. *Nucl. Acid. Res.* 16:4069-4076 (1988).

Waldman, A.S. and **Liskay, R.M.** Dependence of intrachromosomal recombination in mammalian cells on uninterrupted homology. *Mol. Cell. Biol.* 8:5350-5357 (1988).

Waldman, A.S. and **Liskay, R.M.** Resolution of synthetic Holliday structures by an extract of human cells. *Nucl. Acid. Res.* 16:10249-10266 (1988).

Bollag, R.J. and **Liskay, R.M.** Conservative Intrachromosomal Recombination Between Inverted Repeats in Mouse Cells: Association Between Reciprocal Exchange and Gene Conversion. *Genetics* 119:161-169 (1988).

Wang, Y, Maher, V.M., **Liskay, R.M.** and McCormick, J.J. Carcinogens Can Induce Homologous Recombination between Duplicated Chromosomal Sequences in Mouse L. Cells. *Molecular and Cellular Biology* p. 196-202 (1988).

Letsou, A. and **Liskay, R.M.** Effect of the molecular nature of mutation on the efficiency of intrachromosomal gene conversion in mouse cells. *Genetics*, 117: 759-769 (1987).

Waldman, A.S. and **Liskay, R.M.** Differential effects of base pair mismatch on intrachromosomal versus extrachromosomal recombination in mammalian cells. *Proc. Natl. Acad. Sci., USA*, 84: 5340-5344 (1987).

Liskay, R.M., Stachelek, J.L. and Letsou, A., Homology requirement for efficient gene conversion between duplicated chromosomal sequences in mammalian cells. *Genetics*, 115: 161-167 (1987).

Liskay, R.M. and Stachelek, J.L. Information transfer between duplicated chromosomal sequences in mammalian cells involve contiguous regions of DNA. *Proc. Nat. Acad. Sci. USA* 83: 1802-1806 (1986).

Liskay, R.M., Stachelek, J.L. and Letsou, A. Homologous recombination between repeated chromosomal sequences in mouse cell. In: (CSHSQB) Vo. 49, Recombination at the DNA level; pp. 183-189 (1985).

Liskay, R.M. and Stachelek, J.L. Evidence for intrachromosomal gene conversion in cultured mouse cells. *Cell* 35: 157-165 (1983).

Shapira, G., Stachelek, J.L., Letsou, A., Soodak, L.K. and **Liskay, R.M.** Novel use of synthetic oligonucleotide insertion mutants for the study of homologous recombination in mammalian cells. *Proc. Natl. Acad. Sci., U.S.A.* 80: 4827-4831 (1983).

Kratzer, P.G., Chapman, V.M., Lambert, H., Evans, R.E. and **Liskay, R.M.** Differences in the DNA of the inactive X chromosomes of fetal and extraembryonic tissues of mice. *Cell* 33:37-42 (1983).

Chapman, M.E, Kratzer, P.G., Siracusa, L.D., Quarantillo, B.A., Evans, R. and **Liskay, R.M.** Evidence for DNA modification in the maintenance of inactivation of adult mouse tissues. *Proc. Natl. Acad. Sci., U.S.A.* 79:5357-5361 (1982).

Rosentraus, M.G., Sundell, C.L., and **Liskay, R.M.** Cell cycle characteristics of undifferentiated and differentiating embryonal carcinoma cells. *Devel. Biol.* 89:516-520 (1980).

Stancel, G.M., Prescott, D.M. and **Liskay, R.M.** Most of the G1 period in hamster cells is eliminated by lengthening the S period. *Proc. Natl. Acad. Sci., U.S.A.* 78:6295-6298 (1981).

Liskay, R.M. and Evans, R.J. Inactive X chromosome DNA does not function in DNA-mediated cell transformation for the hypoxanthine phosphoribosyltransferase gene. *Proc. Natl. Acad. Sci. U.S.A.* 77: 4895-4898 (1980).

Liskay, R.M., Kornfield, B., Fullerton, P. and Evans, R. Protein synthesis and the presence or absence of a measurable G1 in cultured Chinese hamster cells. *J. Cell Physiol.* 104: 461-457 (1980).

Liskay, R.M., Fullerton, P. and Kornfield, B. Cell hybrid analysis of the presence of G1 in early and late passage 'lung' and 'liver' cells. *Exp. Cell Res.* 128: 191-197. (1980).

Liskay, R.M., Leonard, K.E., and Prescott, D.M. Different Chinese hamster cell lines express a G1 period for different reasons. *Somatic Cell Genet.* 5: 615-623 (1979).

Liskay, R.M. and Patterson, D. A selective medium (GAMA) for the isolation of somatic cell hybrids between HPRT- and APRT- mutant cells. *Cytogenet. Cell Genet.* 23:61-69 (1979).

Liskay, R.M. and Prescott, D.M. Genetic analysis of the G1 period: isolation of mutants (or variants) with a G1 period from a Chinese hamster cell line lacking G1. *Proc. Natl. Acad. Sci. U.S.A.* 75: 2873-2877 (1978).

Liskay, R.M. Genetic analysis of a Chinese hamster cell line lacking a G1 phase. *Exptl. Cell Res.* 114: 69-77 (1978).

Liskay, R.M. Absence of a measurable G2 phase in two Chinese hamster cell lines. *Proc. Natl. Acad. Sci. U.S.A.* 74: 1622-1625 (1977).

Liskay, R.M. and Meiss, G.K. Complementation between two temperature-sensitive mammalian cell mutants, each defective in the G1 phase of the cell cycle. *Somatic Cell Genetic* 3: 343-347 (1977).

Liskay, R.M. A mammalian somatic "cell cycle" mutant defective in G1. *J Cell Physiol.* 84: 49-55 (1974).

Gartler, S.M., **Liskay, R.M.** and Gant, N. Two functional X chromosomes in human fetal oocytes. *Exptl. Cell Res.* 82: 464-466 (1974).

Farber, R.A. and **Liskay, R.M.** Karyotypic analysis of a near-diploid established mouse cell line. *Cytogenet. Cell Genet.* 13: 384-396 (1974).

Gartler, S.M., **Liskay, R.M.** Campbell, B.K., Sparkes, R., and Gant, N. Evidence for two functional X chromosomes in human oocytes. *Cell Differentiation* 1:215-218 (1972).

Bennett, J., Glavinovich, J., **Liskay, R.**, Wulff, D.L., and Cronan, J.E., Jr. Phospholipid hydrolysis in *Escherichia coli* infected with rapid lysis mutants of phage T4. *Virology* 43: 516-518 (1971).

Chapter:

Bollag, R.J., and **Liskay, R.M.** Chromatid interactions during intrachromosomal recombination in mammalian cells. In *Mechanisms of Eukaryotic DNA Recombination*, M. Gottesman, ed. pg. 3-13 (1992).

Maher, V.M., Wang, Y., Bhattacharyya, N.P., McCormick, J.J. and **Liskay, R.M.** Carcinogen-induced homologous recombination in mammalian cells. *Bamby Report 28: Mammalian Cell Mutagenesis.* p. 355-363 (1987).

Letsou, A. and **Liskay, R.M.** Intrachromosomal recombination in mammalian cells. In: *Gene Transfer* (R. Kucherlapati, ed.) pp. 383-409, Plenum Publishing, New York, (1986).

Liskay, R.M., Chapman, V.M., Kratzer, P.G., and Siracusa, L.D. A study of DNA modification and X-inactivation in the mouse using DNA-mediated gene transfer. In *Progress in Cancer Research and Therapy*, Vol. 30, "Gene Transfer and Cancer:", pp. 311-314, Raven Press, New York, (1984).

Prescott, D.M., **Liskay, R.M.** and Stancel, G.M. The cell life cycle and the G1 period. In: *Cell Growth* (C. Nicolini, ed.), pp. 305-314, Plenum Publishing Co., New York, (1982).

Liskay, R.M. and Prescott, D.M. Genetic analysis of the cell life cycle. In: Cell Reproduction (ICN-UCLA) Symposia on Molecular and Cellular Biology) (E.R. Dirksen, D.M. Prescott, and C.F. Fox, eds.) Vol. 12, pp. 115-125, Academic Press, New York, (1978).

Invited Reviews:

Bollag, R.J., Waldman, A.S. and **Liskay, R.M.** Homologous recombination in mammalian cells. Annual Review of Genetics, 23: 199-225 (1989).